AMENDMENTS TO THE CLAIMS

1. (Withdrawn) The DNA sequence 5'-CTCCTCCATGGTTATAAGGG-3' (SEQ ID NO: 9).

2. (Withdrawn) The DNA sequence 5'-CCCAGAGTAAGAACATTATTC-3' (SEQ ID NO: 10).

3. - 4. (Canceled)

5. (Withdrawn) A capturing probe which comprises a single stranded polynucleotide comprising a nucleotide sequence encoding a variant human paraoxonase protein having a substitution of isoleucine by valine at the residue corresponding to position 102 of SEQ ID NO. 4.

6. (Withdrawn) A capturing probe which comprises a single stranded polynucleotide comprising a nucleotide sequence encoding a human paraoxonase protein.

7. - 9. (Canceled)

10. (Currently amended) A method for determining the presence in a biological sample of a DNA sequence comprising a nucleotide sequence encoding a variant human paraoxonase protein, the method comprising determining the allelic pattern of the codon number 102 of a human paraoxonase (PON1) encoding gene in the genomic DNA of the sample, identification of an Ile102Val mutation indicating the presence of said DNA sequence.

11. (Currently amended) A method for screening a subject to determine if said subject is a carrier of at least one Ile102Val mutant paraoxonase gene comprising

a) providing a biological sample of the subject to be screened,

b) performing an assay for detecting in the biological sample the presence of the Ile102Val ~~genotype~~ mutation of the human paraoxonase *(PON1)* gene,

c) identifying as a carrier a subject providing a sample having at least one Ile102Val ~~allele~~ mutation of the human paraoxonase gene in the genotype.

12. (Currently amended) A method for assessing an individual's risk to develop cancer, coronary or cerebrovascular disease, hypertension, type 2 diabetes, dementia, arthrosis, cataract and sensitivity to organophosphorus compounds ~~and/or altered effectiveness of a paraoxonase agonist or paraoxonase inducing or enhancing therapies in an individual~~, comprising

a) providing a biological sample of the subject to be screened,

b) performing an assay for detecting in the biological sample the presence of the Ile102Val ~~genotype~~ allele of the human paraoxonase *(PON1)* gene,

c) identifying as an individual having increased risk of said disease, sensitivity to an organophosphorus compound or reduced effectiveness of a paraoxonase agonist or paraoxonase inducing or enhancing therapy, a subject providing a sample having at least one Ile102Val allele of the human paraoxonase gene in the genotype.

13. (Canceled)

14. (Currently amended) The method according to claim 12 wherein ~~the~~ a DNA in the biological sample is analyzed by hybridizing said DNA, or an amplification product thereof, to an immobilized nucleic acid in a multiplex format.

15. (Withdrawn, currently amended) A kit for performing the method according to claim ~~9 or~~ 10, comprising means for determining the allelic pattern of codon 102 of a paraoxonase encoding *(PON1)* gene in a genomic DNA sample.

16. (New) A method for assessing effectiveness of a paraoxonase agonist therapy, or of a paraoxonase inducing or enhancing therapy, in an individual comprising

a) providing a biological sample of the subject to be screened,

b) performing an assay for detecting in the biological sample the presence of the Ile102Val allele of the human paraoxonase *(PON1)* gene,

c) identifying as an individual having increased risk of said disease, sensitivity to an organophosphorus compound or reduced effectiveness of a paraoxonase agonist or paraoxonase inducing or enhancing therapy, a subject providing a sample having at least one Ile102Val allele of the human paraoxonase gene in the genotype.

17. (new) The method according to claim 16 wherein a DNA in the biological sample is analyzed by hybridizing said DNA, or an amplification product thereof, to an immobilized nucleic acid in a multiplex format.